

Subpart 54.23—Fabrication by Brazing

§ 54.23-1 Scope (modifies UB-1).

(a) Fabrication by brazing shall be in accordance with the provisions of this part and with part 57 of this subchapter.

[CGFR 69-127, 35 FR 9977, June 17, 1970]

Subpart 54.25—Construction With Carbon, Alloy, and Heat Treated Steels

§ 54.25-1 Scope.

(a) The carbon, alloy, and heat treated steels used in construction of pressure vessels and parts shall be as indicated in section VIII of the ASME Code except as noted otherwise in this subpart.

§ 54.25-3 Steel plates (modifies UCS-6).

(a) The steels listed in UCS-6(b) and UCS-6(c) of the ASME Code will be allowed only in Class III pressure vessels (see Table 54.01-5(b)).

§ 54.25-5 Corrosion allowance (replaces UCS-25).

(a) The corrosion allowance shall be as required in § 54.01-35 in lieu of requirements in UCS-25 of the ASME Code.

§ 54.25-7 Requirement for postweld heat treatment (modifies UCS-56).

(a) Postweld heat treatment is required for all carbon and low alloy steel Class I, I-L, and II-L vessels regardless of thickness. (Refer to Table 54.01-5(b) for applicable requirements.)

(b) Cargo tanks which are fabricated of carbon or low alloy steel as Class II pressure vessels, designed for pressures exceeding 100 pounds per square inch gage and used in the storage or transportation of liquefied compressed gases shall be postweld heat treated regardless of thickness.

[CGFR 69-127, 35 FR 9977, June 17, 1970]

§ 54.25-8 Radiography (modifies UW-11(a), UCS-57, UNF-57, UHA-33, and UHT-57).

(a) Full radiography is required for all Class I and Class I-L vessels regard-

less of thickness. (Refer to Table 54.01-5(b) for applicable requirements.)

(b) Class II-L vessels shall be spot radiographed. The exemption provided in UW-11(c) of the ASME Code does not apply. (Refer to Table 54.01-5(b) for applicable requirements.)

(c) Each butt welded joint in a Class II or III pressure vessel cargo tank must be spot radiographed, in accordance with UW-52, regardless of diameter or thickness, and each weld intersection or crossing must be radiographed for a distance of at least 10 thicknesses from the intersection.

[CGFR 68-82, 33 FR 18828, Dec. 18, 1968, as amended by CGD 85-061, 54 FR 50964, Dec. 11, 1989]

§ 54.25-10 Low temperature operation—ferritic steels (replaces UCS-65 through UCS-67).

(a) *Scope.* (1) This section contains requirements for pressure vessels and nonpressure vessel type tanks and associated secondary barrier, as defined in § 38.05-4 and § 154.7 of this chapter, and their parts constructed of carbon and alloy steels which are stressed at operating or hydrostatic test temperatures below 0 °F.

(2) The service temperature is the minimum temperature of a product at which it may be contained, loaded and/or transported. However, the service temperature shall in no case be taken higher than given by the following formula:

$$t_s = t_w - 0.25(t_w - t_B)$$

where:

t_s = Service temperature.

t_w = Boiling temperature of gas at normal working pressure of container but not higher than +32 °F.

t_B = Boiling temperature of gas at atmospheric pressure.

Only temperatures due to refrigerated service usually need to be considered in determining the service temperature, except pressure vessel type cargo tanks operating at ambient temperatures must meet paragraph (d) of this section. "Refrigerated service", as used in this paragraph, means a service in which the temperature is controlled by the process and not by atmospheric conditions.